

REMARKS

I. Amendments to the Claims

Claims 1-47 are pending in this present application. Claims 42-47 are newly added to recite that the animal is of the family Cervidae, and that the animal is of the species *Cervus elaphus*. Support resides in the as-filed specification, for example on pages 8 and 17-18. New claims 42, 44, 46 are dependent on method claims 5, 23, 26 respectively, and new claims 43, 45 and 47 are dependent on new claims 42, 44 and 46 respectively. Claims 6, 7, 24, 25 and 27 and 28 have had their claim dependencies amended to accommodate these new claims. No new matter has been added. Entry of the amendments and favourable consideration are respectfully requested.

II. Restriction Requirement

The Examiner has required election of a single invention, alleging that the application contains four distinct groups of inventions as follows:

- Group I: Claims 1-20 drawn to a method for predicting an unknown value of a property of a velvet antler.
- Group II: Claims 21-25 drawn to a method for predicting a property of a velvet antler.
- Group III: Claims 26-34 drawn to a method for predicting maturity of a velvet antler *in vivo*.
- Group IV: Claims 35-41 drawn to an apparatus for predicting an internal composition characteristic of a velvet antler.

The Examiner states that the inventions listed as Groups I to IV do not relate to a single inventive concept until PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The shared technical feature is the analysis of features of velvet antlers. However, this doesn't represent a special technical feature because it does not represent a contribution over the prior art. For example, Cho *et al.* (IDS, Microchemical Journal, Vol. 68, pages 189-195, 2001) disclose analysis of habitat (country of origin) and ash content of velvet antlers (see abstract).

The Examiner is thanked for a telephone conference on February 6, 2007 which clarified the election requirement.

In order to be responsive to the Restriction Requirement, Applicants include an election, but emphasize that this election is with traverse for the reasons set out below.

Applicants provisionally elect Group I (claims 1-20) for examination with traverse. With the election of Group I, Applicants respectfully request reconsideration of the Restriction Requirement imposed upon Groups II to IV. Applicants reserve the right to pursue any unclaimed subject matter in one or more divisional or continuation applications.

Applicants submit that a technical relationship among Groups I to IV (claims 1-41 and new claims 42-47) resides in the fact that for all Groups, analysis of velvet antler is achieved by acquisition of an infrared thermographic image of a velvet antler, wherein the image is represented as an array of pixels providing temperature data representative of temperature information at the corresponding part of the image. The obtained temperature data is then used for analysis of the velvet antler. These special technical features (as highlighted) represent a contribution over the prior art by provision of a non-destructive method for evaluation of velvet antler. Infrared thermography is a non-invasive imaging procedure involving the detection, recording, and production of an image of surface temperature or thermal patterns, using instruments which can provide immediate visual and quantitative documentation of such temperature measurements.

In contrast, Applicants submit that Cho *et al.* relates to application of near-infrared reflectance (NIR) spectroscopy and use of NIR spectra data. Cho *et al.* does not mention infrared thermography or use of temperature data, as recited in Applicants' claims. For this reason, Applicants submit that Groups I to IV are technically related, and traverse of the restriction requirement for the claims of Groups I to IV is respectfully requested. In addition, no unity issues were raised by the International Searching Authority.

III. Election of Species

The Examiner states that the application contains claims directed to more than one species of the generic invention. The Examiner states that these species are deemed to lack unity of invention because they are not so linked so as to form a single general inventive concept under PCT Rule 13.1.

The Examiner states that Applicants must elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. Further, the Examiner states that a reply must identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election. Upon allowance of a generic claim, the Examiner states that Applicants will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 C.F.R. §1.141. If claims are added after the election, the Examiner states that Applicants must indicate which are readable upon the elected species.

Applicants respectfully traverse all species elections. According to the MPEP: "if the members of the Markush group are sufficiently few in number or so closely related that a search and examination of the entire claim can be made without serious burden, the examiner must examine all the members of the Markush group in the claim on the

merits, even though they are directed to independent and distinct inventions." MPEP §803.02.

The Examiner has required election of six species for Group I (pages 3-11 of the Office Action). This requirement is believed to be improper as the invention as a whole is being disregarded. If the invention as a whole is considered, it is believed all "species" will be considered together in a search. For the first species election, the Examiner has required an election of species which relates to the composition characteristic and lists species A-H. Applicants elect prosecution of species B (ash content) with traverse. The election of species B reads on claims 1-20 and new claims 42, 43. With the election of species B, Applicants respectfully request reconsideration and withdrawal of the species election requirement imposed upon species A and C-H. Species A-H are related in being internal composition characteristics in velvet antler. For this reason, Applicants submit that species A-H are technically related, and traverse of species restriction A and C-H with species B is respectfully requested.

The Examiner has further required an election of species which relates to the input variable and lists species I-T. Applicants elect prosecution of species P (antler geometric measure) with traverse. The election of species P reads on claims 1-20 and new claims 42, 43. With the election of species P, Applicants respectfully request reconsideration and withdrawal of the species election requirement imposed upon species I-O and Q-T. Species I-T are related in being input variables which are not derived from infrared thermography and any can be included in the predictive model. For this reason, Applicants submit that species I-T are technically related, and traverse of species restriction I-O and Q-T with species P is respectfully requested.

The Examiner has further required an election of species which relates to the animal and lists species U-Z, AA-AZ and AAA-AAB. Applicants elect prosecution of species Z (canadensis) with traverse. The election of species Z reads on claims 1-20 and new claims 42, 43. Applicants respectfully traverse this species election.

Applicants submit that antler growth proceeds in the same manner in all species of Family Cervidae (deer). This process is described in the paragraph bridging pages 1 and 2, and on page 2, lines 5-11 of the as-filed specification. In the event that the Examiner disagrees, Applicants have added new claims 42 and 43, dependent on claims 5 and 42, which recites that the animal is of the family Cervidae, and the species *Cervus elaphus*. *Cervus elaphus* is one species among many within the family Cervidae. Support resides in the as-filed specification on pages 8 and 17-18. To facilitate examination, Applicants submit that this single species *Cervus elaphus* is clearly "sufficiently few in number" that a "search and examination of the entire claim can be made without serious burden." Applicants prefer to have *Cervus elaphus* as the species under examination. Applicants request that at least, all *Cervus elaphus* subspecies be examined together (i.e., *Cervus elaphus manitobensis*, *Cervus elaphus nelsoni*, *Cervus elaphus roosevelti*, *Cervus elaphus scoticus*, *Cervus elaphus xanthopygus* and *Cervus canadensis*).

The claims are believed to properly involve Markush practice. "Markush practice" is discussed in PCT Administrative Instructions Annex B. "The situation involving the so-called 'Markush practice' wherein a single claim defines alternatives (chemical or non-chemical) is also governed by Rule 13.2. In this special situation, the requirement of a technical interrelationship and the same or corresponding special technical features as defined in Rule 13.2, shall be considered to be met when the alternatives are of a similar nature." (emphasis added). Using the guidance provided in PCT Administrative Instructions Annex B, if there is an "expectation from the knowledge in the art that members of the class will behave in the same way in the context of the claimed invention", the alternatives shall be regarded as being of a similar nature. (PCT Administrative Instructions Annex B, paragraph (f)(iii)). In this species election, the class is animals that have velvet antler. It is expected that all members of the class will behave in the same way in the context of the claimed invention, and as such, these alternatives fulfill the requirement of a special technical feature. The requirement of election between the alternatives is improper and should be withdrawn.

The Examiner has further required an election of species which relates to the statistical technique and lists species AAC-AAH. Applicants elect prosecution of species AAG (ranking) with traverse. The election of species AAG reads on claims 1-20 and new claims 42, 43. With the election of species AAG, Applicants respectfully request reconsideration and withdrawal of the species election requirement imposed upon species AAC-AAF and AAH. Species AAC-AAH are related in being statistical techniques, any of which can be used to determine the relationship between the known input variable and known value for the composition characteristic. For this reason, Applicants submit that species AAC-AAH are technically related, and traverse of species restriction AAC-AAF and AAH with species AAG is respectfully requested.

The Examiner has further required an election of species which relates to the image being obtained *in vivo* or *in vitro* and lists species AAI-AAJ. Applicants elect prosecution of species AAI (image obtained *in vivo*) with traverse. The election of species AAI reads on claims 1-20 and new claims 42, 43.

The Examiner has further required an election of species which relates to the temperature change and lists species AAK-AAL. Applicants elect prosecution of species AAK (the temperature change is cooling) with traverse. The election of species AAK reads on claims 1-13, 15, and 17-20 and new claims 42, 43.

In summary, based on the above amendments and remarks, Applicants respectfully request reconsideration of the Restriction Requirement and simultaneous examination of all the claims. At the very least, Applicants respectfully request reconsideration of the species elections.

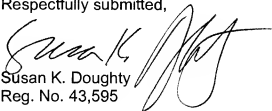
IV. Conclusion

In view of the foregoing, it is submitted that this case is in condition for allowance, and passage to issuance is respectfully requested.

If there are any outstanding issues related to patentability, the courtesy of a telephone interview is requested, and the Examiner is invited to call to arrange a mutually convenient time.

This response is accompanied by a Petition for Extension of Time (two months) and authorization to charge the Deposit Account 07-1969 in the amount of \$450 for a large entity. It is believed that this response does not necessitate the payment of any additional fees under 37 C.F.R. 1.16-1.17. If the amount submitted is incorrect, however, please charge any deficiency or credit any overpayment to Deposit Account No.07-1969.

Respectfully submitted,


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